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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AGUSTIN GONZALES-TUCHMANN, LARRY LEE
SCHUMACHER, LAURENCE TOBIN YOGMAN, and
PAUL C. DINGMAN

Appeal 2009-013551
Application 10/700,152
Technology Center 2100

Before ROBERT E. NAPPI, JEFFREY S. SMITH, and
BRUCE R. WINSOR, *Administrative Patent Judges*.

WINSOR, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1-20, which constitute all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

[Appellants'] invention relates to a system and method for managing data which includes data transformation, such as data warehousing, data analysis or similar applications. In particular, the invention relates to the synthesis from dataflow graphs of computationally efficient executable applications well suited for parallel execution.

(Spec. 2:5-8.) Claim 1, which is illustrative of the invention, reads as follows:

1. A method for developing a dataflow application comprising:
 - developing one or more data transformations using a host language;
 - assembling several data transformations having ports into a map component with links between ports using a declarative language for static assemblage and a host language for dynamic assemblage, wherein a map component performs a respective data transformation;
 - compiling one or more map components with syntactic and semantic analysis; and
 - synthesizing the compiled map components into an executable dataflow application including removing the design time links between ports.

Claims 14-20 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 1, 2, 4-14, and 16 stand rejected under 35 U.S.C. § 102(e) as anticipated by Swamy (US 6,874,141 B1, Mar. 29, 2005).

Claims 3 and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Swamy in view of Block (US 6,947,947 B2, Sept. 20, 2005).

Claims 17-20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Swamy in view of Colliat (US 6,449,619 B1, Sept. 10, 2002).

Rather than repeat the arguments here, we make reference to the Brief (filed Dec. 8, 2008) and the Answer (mailed April 15, 2009) for the respective positions of Appellants and the Examiner. Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants did not make in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2011).

ISSUES

The pivotal issues raised by Appellants' contentions are as follows:

Do claims 14-20 encompass non-statutory subject matter under 35 U.S.C. § 101? More particularly, do claims 14 and 17 recite non-functional descriptive material?

Are claims 1, 2, 14-14, and 16 anticipated under 35 U.S.C. § 102(e) by Swamy? More particularly, does Swamy disclose:

- (a) “a map component that performs a respective data transformation[,]” and “compiling one or more map components with syntactic and semantic analysis[;]”
- (b) “synthesizing the compiled map components into an executable dataflow application including removing the design time links between ports[;]”

- (c) “developing one or more data transformations using a host language[,]” and “assembling several data transformations having ports into a map component with links between ports using a declarative language for static assemblage and a host language for dynamic assemblage[;]” and
- (d) “synthesizing the compiled map components into an executable dataflow application including removing the design time links between ports[;]”

as recited in claim 1?

Are claim 3 and 15 obvious under 35 U.S.C. § 103(a) over the combination of Swamy and Block? More particularly, would a person of ordinary skill in the art have employed Block’s teaching of encryption with Swamy’s teaching of elements that transform input data into output data (i.e., map components)?

Are claims 17-20 obvious under 35 U.S.C. § 103(a) over the combination of Swamy and Colliat? More particularly would a person of ordinary skill in the art have employed Colliat’s teaching of dividing data and processes and pipelining in parallel to Swamy’s method of compiling schema mapping (i.e., dataflow application)?

ANALYSIS

REJECTIONS UNDER 35 U.S.C. § 101

The Examiner finds that claims 14-20:

do not clearly and unambiguously recite the necessary functional and structural interrelationship between the software elements and the remaining elements of a computer. Specifically, the computer-readable medium "having" a particular environment does not necessarily imply storage of an executable program capable of causing a computer to carry out the described functionality.

(Ans. 4.) Appellants argue that, in view of this Board's decision in *Ex parte Li*, 88 USPQ2d 1695 (BPAI 2008) (nonprecedential), "the term 'having' has been used as a transitional phrase and [should be] interpreted as reciting an executable program for causing the recited functionality" (Br. 5). We disagree.

As pointed out by the Examiner, the claim recited in Appellants' Brief to support the sufficiency of the use of the term "having" (*id.*) recites more structural and functional interrelationship than do Appellants' claims 14-20 (Ans. 10). Therefore, the Appellants' arguments, which are not commensurate with the claim language, do not persuade us that the Examiner erred in rejecting claims 14-20 under 35 U.S.C. § 101.

For emphasis, we note that Appellants' Specification provides no definition or other disclosure of a computer-readable medium (*see Ans. 10-11*). Giving claims 14-20 their broadest reasonable interpretation, *see In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997), we conclude that the claims are not limited to an article of manufacture or any other category of statutory subject matter, because they do not preclude a computer-readable medium that is medium, such as a propagation medium, bearing a transitory signal, *see In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007).

Accordingly, we will sustain the rejection of claims 14-20 under 35 U.S.C. § 101.

REJECTIONS UNDER 35 U.S.C. § 102(e)

Appellants contend that Swamy does not disclose:

- (a) "a map component that performs a respective data transformation[,]” and “compiling one or more map components with syntactic and semantic analysis[;]”

- (b) “synthesizing the compiled map components into an executable dataflow application including removing the design time links between ports[;]”
- (c) “developing one or more data transformations using a host language[,]” and “assembling several data transformations having ports into a map component with links between ports using a declarative language for static assemblage and a host language for dynamic assemblage[;]” and
- (d) “synthesizing the compiled map components into an executable dataflow application including removing the design time links between ports[;]”

as recited in claim 1. (Br. 8-9.)

We have reviewed the Examiner’s findings (Ans. 5) and explanations (Ans. 11-12), find them to be reasonable and persuasive, and adopt them as our own.

Accordingly, we will sustain the rejection of claim 1, and of claims 2, 4-14, and 16, which were not separately argued.

REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 3 and 15

We note at the outset that the phrase “the dataflow graphs” in claim 3 has no antecedent basis in claim 3, or in claim 1 from which it depends.

Appellants’ Specification (Spec. 3:11-20, 4:27-5:19, 12:15-13:14, 14:1-11, 17:13-19, 27:7-10) uses “dataflow graph” to describe both a dataflow map and a map component (*see, e.g.*, Spec. 14:11, 17:16-17). From the context of claim 3, which recites “encrypting the dataflow graphs *prior to* the step of compiling the map component” (emphasis added), we construe “the dataflow graph” to refer back to the “map components” recited in claim 1.¹

¹ In the event of further prosecution of claim 3, we leave to the Examiner and Appellants to clarify the antecedent bases for the terms in the claim.

This claim construction is consistent with Appellants' arguments (*see Br.* 10).

Appellants contend "there is no suggestion of the encryption of map components as called for in claims 3 and 15 by the data encryption techniques of Block." (*Br.* 10.) The Examiner explains that

the combined teachings of Swamy and Block show the use of known techniques serving the same purpose of providing a data transformation application, and the combination of such known components being used merely as they were intended to use would yield predictable results (i.e., the transformation of data with the known benefits of encryption)

(Ans. 13.)

We agree with the Examiner. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). "If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." *Id.* at 417. We find that the application of Block's known technique of encryption to Swamy's known data transformation elements (i.e., map components) would predictably protect Swamy's data transformation elements in the same way it protects Block's data.

Accordingly, we will sustain the rejection of claims 3 and 15.

Claims 17-20

In arguing the patentability of claim 1 Appellants also argued the patentability of claim 17, based on parallel limitations between claim 1 and 17 (*see Br.* 8, 10-11). For the reasons set forth *supra* regarding claim 1, we find those arguments to be unpersuasive.

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Appellants further contend that “there is no suggestion [in Colliat] that dividing data and processes and pipelining in parallel would be applicable to Swamy, much less suggest the claim limitations recited in claims 17-20” (Br. 11). The Examiner explains as follows:

Because the combined teachings of Swamy and Colliat show the use of known techniques serving the same purpose of providing a data transformation application, and the combination of such known components being used merely as they were intended to use would yield predictable results (i.e., the transformation of data with the known benefits of increased efficiency by running multiple data transformations on parallel threads)
(Ans. 14-15.)

We agree with the Examiner and will sustain the rejection of claim 17, and of claims 18-20, which were not separately argued.

DECISION

The decision of the Examiner to reject claims 1-20 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2011).

AFFIRMED

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